



Resource Recovery

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PROVINCIAL PURCHASING POLICIES

TO INCREASE THE DEMAND

FOR RECYCLED PAPER IN ONTARIO

Dr. J. A. Donnan

Environmental Approvals Branch

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.D66
P76
1977
MOE

August, 1977



Ontario

Ministry
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TD
794.5
.D66
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Provincial purchasing policies to
increase the demand for
recycled paper in Ontario.
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TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION	1
PROVINCIAL PURCHASING PROCEDURES AND POLICY . . .	3
KINDS AND AMOUNTS OF PAPER PURCHASED BY THE PROVINCIAL GOVERNMENT	6
ACTIVITIES OF THE FEDERAL GOVERNMENT	8
SCOPE FOR INCREASING THE LEVEL OF RECYCLED CONTENT IN GOVERNMENT PAPER PURCHASES	10
Quality Characteristics	10
Barriers to a Purchasing Policy	12
OTHER PURCHASING AGENCIES	16
CONCLUSIONS	18
RECOMMENDATIONS	20
 APPENDIX A	 22
APPENDIX B	24

INTRODUCTION

A study of waste paper markets in Ontario and Canada was undertaken in which various Provincial Government actions to increase the use of waste paper were proposed and evaluated*. The report concluded with five recommendations**.

This report deals with recommendation #1:

"to implement a recycling programme within the Ontario Government".

This recommendation consists of four primary elements:

- c) a) "review the quality characteristics of paper products used by the government and, where feasible, alter these characteristics to permit the inclusion of more waste paper",
- d) b) "specify, where feasible, a minimum recycled fibre content and more 'recyclable' designs in paper products purchased by the Provincial Government",
- e) c) "undertake an organized, systematic fine paper recovery programme throughout Provincial Government buildings", and
- f) d) "publicize the programme and the methods used to implement the programme" as an example to other public and private agencies that use paper products.

* Jack Donnan, "PAPER RECYCLING IN ONTARIO", Toronto, Ontario, Ministry of the Environment, August, 1976

** IBID, p 164-66

The waste paper recovery aspect (part c) of this proposed programme is being implemented in part through a joint Provincial/Federal Study of provincial and federal buildings in Toronto. In addition, a desk-top waste paper separation system has been tested at the offices of the Resource Recovery Branch and the Waste Management Advisory Board.

The present study will focus on parts a) and b) of the recommendations.

The objectives of the present report are as follows:

1. Determine more precisely the quantities and kinds of paper products being purchased and used by the Provincial Government.
2. Examine government purchasing procedures in order to determine what could be done to increase the amount of recycled fibre in the paper products that are bought.
3. Investigate the scope and the implications of specifying a minimum level of recycled paper content.
4. Determine how provincial purchasing policies may influence other institutional users such as school districts and hospitals.
5. Recommend steps to implement a Provincial Government preferential purchasing policy if such a policy is found to be feasible.

Invaluable assistance for this work was provided by the Office Products Section of the Supply Administration Branch, Ontario Ministry of Government Services. Liaison with the Federal Department of the Environment has been established for this project. Their efforts parallel our own in the matter of purchasing policies and it is advisable that some of our programmes be undertaken jointly. A number of school boards and universities were also contacted to get information on paper usage by those institutions.

PROVINCIAL PURCHASING PROCEDURES AND POLICY

The Provincial Government buys paper products in essentially two ways: directly as letterhead, envelopes, writing papers, towels, toilet tissue, etc.; and indirectly as reports, newspapers and other government publications which are contracted to private printers. Direct purchases are made by individual Ministries under 'Standing Agreements' which the Ministry of Government Services makes with wholesalers. The Supply Services Administration Branch specifies the product characteristics, the minimum quantities and conditions of delivery of the various products, then receives tenders from paper merchants. The Standing Agreements are awarded primarily on the basis of low bids. Within the limits of these Agreements, individual Ministries and their component Branches make the decisions as to what, when and how much of each product to buy.

The Provincial Government buys fine papers, computer printout, paper towels and toilet tissues directly. It also buys a small amount of corrugated containerboard, but virtually no boxboard or newsprint. In addition, the Government Stationery Services of MGS purchases products like file folders, index cards and writing tablets directly from paper merchants and stationers but outside the Standing Agreement system.

The printing of over one-half of the documents and periodicals published by the Provincial Government is contracted to private printers, with the remainder being printed in government-owned and operated print shops.

The Printing Services Branch of the Ministry of Government Services arranges for the design and printing of many government documents but the Ministries themselves often make their own printing contracts. In addition to fine papers, book grades and newsprint are used in these contract government publications. Several Ministries, including Transportation, Environment, Health, and Treasury have their own print shops. These shops obtain most of their paper through the Standing Agreements.

By way of example, the printing shop located in the Ministry of the Environment building (135 St. Clair Avenue, West) produces about 600 technical reports a year along with forms, pamphlets and other printed materials*. Approximately \$120 000 is

* information provided by former printing co-ordinator of the Ministry of the Environment

spent annually on printing services for 3500 printing jobs in the Ministry. In total, almost 30 tons of fine papers are used each year.

In preparing tenders for Standing Agreements, the Ministry of Government Services uses Federal Government product standards from the Department of Supply and Services for such characteristics as brightness, strength, thickness, etc. A Commodity Committee on Paper made up of representatives from certain provincial Ministries reviews and decides on successful tenders. *Price interest only.*
This Committee is presently composed of the Ministries of Government Services, Agriculture and Food, Education, Transportation and Communications, and Revenue.

Specifications for various products are developed by the Canadian Government Specifications Board to which MGS sends representatives. While they are not obligatory, these specifications are generally used by MGS because it would be duplication of effort to make their own and because manufacturers can realize economics of scale by producing products to conform to these standardized specifications and customers (i.e. the Canadian and Ontario Governments) can negotiate price concessions when they buy these products*.

As a result of an investigation by staff of the Ministry of Government Services and the Ministry of the Environment completed in 1971, MGS currently requests that suppliers who submit

* Manager, Office Products Section, Ministry of Government Services, June, 1977

tenders indicate the amount of recycled content and the origin of the secondary raw material*. Where price and quality characteristics of products containing recycled content are equal to similar products made from virgin fibres, MGS has given preference to recycled products. The recycled content indicated on these tenders likely includes mill broke as well as post consumer waste paper stock. MGS does not now analyze the composition of their paper products to check suppliers' claims of recycled content. It is unlikely that they will do so in the future.

KINDS AND AMOUNTS OF PAPER PURCHASED BY THE PROVINCIAL GOVERNMENT

An estimate of the amounts of the major types of paper products purchased by the Province of Ontario in 1974 is presented in Table 1. Some of the paper used by the Province already contains recycled materials. However, it is not known precisely how much paper stock each product grade contains.

Bond and fine papers along with roll stock and tabulated computer papers constitute 65 percent of the paper products purchased under the Standing Agreements. These products are, therefore, the most obvious targets of any policy to increase the recycled content.

Purchases of paper through printing contracts amount to at least as much paper as that purchased under the Standing

* G. A. Khan and K. A. Childs, RECYCLED PAPER - RECOGNITION OF THE WASTE MANAGEMENT PROBLEM AND SUPPLY POLICY RECOMMENDATIONS, Supply Project #1, (unpublished report).

TABLE I
PAPER PRODUCTS PURCHASED BY THE
ONTARIO GOVERNMENT IN 1975 - 76

Products	Amount tons
Standing Agreements	
- computer cards	200
- stock tabs (computer output paper)	600
- bond and fine papers	1000
- roll stock (bond)	100
- corrugated cartons	20
- towelling	360
- tissues, serviettes	320
Total:	2600
Government Stationery Service	
- file folders) no data
- index cards	
- writing pads	
Contract Printing (total)	3000

Source: Standing Agreements - Office Products Section
of MGS; G. Khan and W. Attree

Contract Printing - Rudy Noll, Printing Pro-
curement Section, MGS. Verbal estimates only,
includes in-house printing by several ministries.

Agreements.

According to staff in the Printing Services Branch, no effort is made to specify recycled content. There is, however, no reason why such specifications could not be included in printing contracts if so desired.

The Government Stationery Services does not ask its suppliers about the recycled content of the products it buys. However, when contacted, J. B. Wickens, Manager of the Section, indicated that he would likely include questions about recycled content in future tenders.

ACTIVITIES OF THE FEDERAL GOVERNMENT

The Waste Management Branch of Environment Canada is pursuing a number of programmes which are relevant to the activities under consideration here.

First of all, in co-operation with the Director General of Supply, Department of Supply and Services (DSS), a set of specifications for "environment bond" paper has been prepared and is presented in Appendix A. These specifications have been circulated to the companies owning fine paper mills by Mr. Ed Roberts, Director General of Supply. According to Mr. T. E. Rattray, Director of the Waste Management Branch, the companies consulted all responded that they could, in fact, supply a product with these specifications.

The DSS verbally agreed to put out a tender for about 100 tons of this paper and make it available to any Federal Agency that wants it on a voluntary basis. The DSS has agreed to pay a

premium for the product, if necessary, in order to try the material. It is expected that, as consumption and production increase, the price will eventually equalize with that of regular #7 bond.

Mr. Rattray and his staff were of the opinion that the recycled fibre used to make the product should not be restricted to that of "Canadian origin". Mills and dealers should be permitted to obtain paper stock from whatever source they want. Although both the Federal and Provincial Governments will likely be undertaking programmes to recover more high grade paper stock here in Canada. This material will be introduced into the existing wastepaper market system for processing and distribution to user mills. The authors of this report concur that there should be no restrictions on the origin of recycled paper in government purchasing policies. The Federal Branch has also hired Middleton and Associates to compile guidelines for office paper recovery. This guide will be completed by August, 1977. The Terms of Reference for this study are attached.

The Branch is also making recommendations to the Taxation Division of the Treasury Board concerning tax provisions to encourage recycling. There is little more to report on this. The Waste Management Branch is not actively engaged in encouraging companies to install recycling capacity. Mr. Rattray reported that the Branch will be funding the first two or three years of an Industrial Waste Exchange Programme. A Contract has been granted to a firm to run it and it is intended that the scheme will eventually become self-supporting.

The Branch has also received an unsolicited proposal to start a paper stock trade publication for Canada. It has not been decided whether to accept and fund this proposal.

Finally, the Branch has approached Statistics Canada to suggest to them that they collect and publish more data on the consumption, import, and export of secondary materials (see attached letter). It appears that the Canadian Association of Recycling Industries would not be a feasible source of such data at this time.

SCOPE FOR INCREASING THE LEVEL OF RECYCLED CONTENT IN GOVERNMENT PAPER PURCHASES

QUALITY CHARACTERISTICS

Quality characteristics of paper products will not necessarily deteriorate with the increased inclusion of waste paper stock. Manufacturers can offset lower brightness with additional bleaching; remove spots and contaminants with increased stock cleaning operations and maintain strength by a careful selection of the waste paper stock used. Indeed, an increased content of paper stock in fine papers can improve some functional qualities of fine paper. For example, fine papers containing recycled fibre have greater opacity and bulk (caliper - basis weight) than virgin fibre papers. In addition, recycled papers are less prone to curling than papers containing a high proportion of virgin fibre*.

* H. Spencer, Consultant, ADVANTAGES AND DISADVANTAGES OF USING UNDE-INKED WASTE PAPER PULP TO MAKE FINE PAPER, unpublished report, October, 1975.

It is true, however, that permitting lower brightness and more spots in the finished sheet can allow the papermaker to offset some of the additional costs of using more waste paper (i.e. extra bleaching and stock preparation). Moreover, this would result in a lower overall cost of virgin fibre paper products as well. From the manufacturer's point of view, a change in quality characteristics could be achieved if enough customers were to accept it. Such a change in consumer preferences would involve educational and public information programmes. This might be an important area for the Waste Management Advisory Board's activity.

In addition, there are a number of factors associated with increased recycling which can affect the costs of making paper (apart from the prices of the paper). The addition of paper stock can result in increased machine downtime (for cleaning), more breaks from contaminants, more bleaching and refining and more stock rejection, all of which imply higher costs. On the other hand, paper stock is normally a cheaper source of fibre than virgin pulp. Transportation costs to non-integrated mills located in urban areas tend to be lower for secondary fibre than for virgin fibres since the latter have to be hauled long distances.

The cost of making paper is extremely sensitive to the amount of output. The production of large quantities of the same kind of paper in the course of long runs on the paper machine lowers the unit cost of the product. Short runs with frequent changes in grade and quality significantly increases costs. Consequently, there are factors that decrease as well as increase costs.

The net effect must be determined empirically.

It is necessary, therefore, to make any changes in specs known to the industry and then allow a period of time for the industry to make necessary adjustments; i.e. build up orders, obtain paper stock, have free paper machine time, etc. It would, therefore, be desirable to co-ordinate purchases of "environment bond" as well as other new types of products with other customers so as to permit manufacturers to take advantage of economies of scale.

BARRIERS TO A PURCHASING POLICY

A number of barriers to a Provincial preferential purchasing policy have been identified in the Khan-Childs report of 1971 and in the course of conversations with staff in the Supply Administration Branch. These problems and possible solutions to them are considered below.

1. A government purchasing policy favouring recycled paper would give an unfair advantage to Abitibi, Thorold - it being the only fine paper de-inking mill in Ontario.

It is unlikely that an advantage would be given to any single company as long as the preference policy for recycled paper is introduced gradually over one to two years. This would give other firms time to obtain the equipment and paper stock in order to increase their paper stock content. Market dislocation would occur if a purchasing policy was implemented precipitously with an arbitrary requirement for recycled content.

2. Paper users (other Ministries, not MGS, dictate paper quality characteristics.

The co-operation of other ministries in using paper of lower brightness and greater spot, perhaps lower strength, could be enlisted in two complementary ways:

- a) meeting with the Paper Commodity Committee, and
- b) communication between the Minister of the Environment and other relevant ministers.

3. MGS will not pay a premium for higher recycled content.

A preferential purchasing policy favouring products with a high recycled content may force MGS to buy paper products at a higher price. The present policy is to buy products that meet specifications at the lowest price. This is essentially a "management" decision. However, Cabinet or Management Board could authorize MGS to purchase recycled paper even at a higher price. Indeed, the Provincial Cabinet has already authorized MGS to buy metric size paper at a premium.

In addition, it is noted that the Federal Department of Supply and Services plans to order a certain quantity of high recycled content paper, at a premium price if necessary, to allow other agencies to try out the material. Therefore, it is suggested that the Provincial Government be prepared to pay a premium for an initial paper purchase in order to get the programme underway.

A government preference for recycled content paper can be made clear without committing MGS to higher cost supplies. This can be accomplished by:

- a) phasing in the recycled content specs,
- b) purchasing supplies in concert with the Federal Department of Supply and Services, and
- c) allowing for lower brightness and increased spots on papers (see attached Federal Government specs for recycled content paper).

4. Premium and de-inking grades of paper stock are in short supply so that, even if the Provincial Government were to initiate a preferential purchasing policy, mills would be unable to obtain the paper stock they need to comply. Moreover, an increased demand for de-inking grade paper stock would only be supplied by increased imports from the U.S.
-

This problem can be overcome by undertaking government programmes to recover high grade waste paper prior to or concurrent with the purchasing policies. In addition, phasing in the purchasing preference programme will give mills time to place orders and dealers time to arrange for supplies. The experience gained and the example set by the government in the recovery of de-inking grade paper stock can be extended to other public and private sectors and the supply of these grades can thereby be steadily increased.

The amount of fine papers that become waste paper and is available for recovery in Ontario amounts to at least 400 000 tons per year*. So long as efforts to recover more of this kind of waste paper are co-ordinated or at least occur at the same time as efforts to increase demand, increased amounts of de-inking grade paper stock generated within Canada should be sufficient to meet increased demand.

5. Northern mills could complain that a preferential purchasing policy favouring increased recycled content will put them at a competitive disadvantage.

The Reed mill at Dryden would be the only mill so affected. It is the opinion of the authors that a preferential purchasing policy as described in this report would have very little effect on the sales and output of the Dryden Mill. We can, however, solicit Reed's reactions on the policy.

The Department of Supply and Services has also queried most fine paper manufacturers in Canada about such a preferential purchasing policy along with proposed specs for a recycled bond paper. According to Mr. Rattray, these companies indicated that they would be able to supply the requisite products. Efforts are now being made to obtain the companies' responses in writing.

* J. A. Donnan, PAPER RECYCLING IN ONTARIO
August, 1976, p 87

OTHER PURCHASING AGENCIES

Public agencies such as school boards, hospitals, and universities comprise a major consumer of paper products across the Province. A number of these institutions have been contacted to determine the amounts of products they purchase as well as their relationships with relevant provincial ministries. The findings of this activity are presented below.

1. Boards of Education act as the central purchasing agents for all schools under their jurisdictions. Six Ontario School Boards were surveyed as indicated in Table 2, representing 16 percent of the enrollment in Ontario. An estimated 51 tons of all types of paper are consumed annually by these Boards. Based on the figures given in Table 2, about 322 tons were used annually by all Boards in the Province during recent years.

In 1974, the Minister of Education requested all Boards to show preference for recycled paper in their annual tenders*.

Some Boards have complied by indicating a preference in their tenders. While school boards know how much money they spend on paper products, they are generally unaware of the amount of paper they use annually and of the amount of the recycled component in the paper supplied by the successful bidder. Other Boards indicate no preference for recycled material. In all cases the minimum price for a specified quality of paper is the primary criterion of choice.

* Efforts to locate this letter have not been successful but the Minister's office assured us of its existence.

TABLE 2: PROVINCIAL BOARDS OF EDUCATION SURVEYED

Board	Student Enrollment 1976	Annual Value Paper Purchase	Total Tons	Tons/Student	Tender Requirements	Who sets Quality Specifications
North York	93 000	\$ 446 000	13.92	.000150	"recycled materials where possible"	Board
Etobicoke	55 000	315 000	9.83	.000179	"recycled materials where possible"	Board
Peel	80 000	338 000	10.55	.000132	no specifications	Board
Hamilton	48 000	300 000	9.36	.000195	no specifications	Uses Federal Govern- ment specs
Wellington	26 000	149 000	4.65	.000179	"recycled materials where possible"	Board
Grey Co.	15 000	100 000	3.12	.000208	no specifications	Board
TOTAL	317 000	1 648 000	51.43	.000162	-	-
ONTARIO TOTAL	1 984 000	-	321.8		-	-

1. Source: Ministry of Education
2. Conversion factor derived from Statistics Canada, PULP AND PAPER MILLS, Ottawa, 1975, p 12 - ton/dollar for relevant types of paper = .0312
3. Total tons derived from tons per student X Ontario enrollment
4. Types of Paper Used: bond, bristol, cartridge, chart, crepe, duplicating, manilla, foolscap, mimeo, newsprint, onion skin, refill, exercise book, tissue paper, towelling

School Boards would be likely candidates to use the "environment bond" paper suggested earlier.

2. Hospitals primarily use sanitary papers and make purchases independently of the Ministry of Health. The Ontario Hospital Association, a leading supplier, claims that supplies to consumers contain some recycled content, but they do not know how much.
3. Universities acquire paper through their central purchasing offices by means of annual tender. No recycled content is specifically requested in the tenders by the two universities contacted*. A recycled component is requested in tissue and towelling tenders by Guelph University. However, authorities at McMaster University indicated that they will not use recycled towelling for sanitary reasons.

CONCLUSIONS

1. The Provincial Government gives no specific preference on a public or internal basis to paper products containing recycled paper stock.
2. The Ministry of Government Services currently gives preference to paper products containing recycled paper so long as the price is not higher than comparable products and the quality characteristics do not diverge from specifications. This policy is not sufficient to stimulate the demand for waste paper or provide an example to be followed by other paper purchasers.

* The University of Guelph and McMaster University

3. The Ministry of Government Services is willing to adopt policies that would give preference to recycled paper but is concerned that customer ministries would complain about the quality and the appearance of such products.
4. The purchase of some quantities of "environment bond" paper in conjunction with the Federal Government would be an appropriate beginning to a purchasing policy.
5. Each of the various barriers and constraints to establishing a Provincial Government purchasing policy favouring recycled paper can be resolved or overcome by means of specific implementation strategies.
6. The Waste Management Branch of the Federal Department of the Environment is developing and implementing a number of programmes and policies, including a preferential purchasing policy, that directly complement provincial efforts.
7. The relevant provincial ministries have no control over purchases made by local school boards, hospitals or universities. However, these agencies purchase relatively large amounts of paper and some which were contacted expressed an interest in both purchasing recycled paper and recovering paper for recycling.

RECOMMENDATIONS

1. A presentation to the Provincial Government Paper Commodity Committee should be made to explain the objectives of a Provincial Government purchasing policy which favours recycled products, to indicate our intent to purchase the "environment bond" paper and to ask that they support these efforts.
2. Arrange with the Office Supply Branch of the Ministry of Government Services to purchase sample lots of the "environment bond" paper in conjunction with Environment Canada and the Federal Department of Supply and Services and make this available to consumer ministries on a trial basis.
3. A joint policy field proposal should be prepared for the Ministries of Environment, and Government Services stating:
 - a) the Provincial Government adopt a clear policy to purchase products containing secondary materials, especially recycled paper,
 - b) The Office Supply and the Printing Services Branch of MGS as well as other ministries should make it clearly known to suppliers that recycled paper is preferred for standing agreement purchases and for printing contracts. Tenders should then indicate the desired recycled content of the paper to be purchased or used,

- c) All tenders to all ministries should state the recycled content of paper products.

The strategy for implementing this policy is as follows:

- a) There will be no restriction on the grade or origin of paper stock used as recycled content for the first twelve months of the programme,
- b) After twelve months, paper stock will be restricted to post-consumer waste, defined as categories 1, 2, 3, 4, and 5 in CPPA Data Sheet Z-26 (See Appendix B),
- c) After twelve months, at least 50 percent of specified products purchased under standing agreements should meet the specifications for recycled paper that are in force at the time, and
- d) After twenty-four months, at least 90 percent of specified products purchased under standing agreements should meet specifications.

This purchasing policy will be undertaken in conjunction with a government programme to systematically recover high grade waste paper stock from government buildings.

- 4. Meetings between the Ontario Ministries of Environment and Government Services and the Federal Departments of the Environment and Supply and Services should be held to co-ordinate implementation of programmes.

APPENDIX A

DSS PRINTING AND PUBLISHING

PURCHASE DESCRIPTION FOR "ENVIRONMENT BOND" PAPER

1. This paper is a general purpose bond paper for use in printing, typewriting, ruling, and also writing by pen or pencil.
2. This paper is designed to replace No. 7 Bond paper in applications where high brightness and whiteness are not essential, but the other properties of No. 7 Bond are required. Apart from the colour and the presence of post-consumer waste, this paper will be equivalent to No. 7 Bond papers.
3. The colour of the paper shall be grey-white. The paper may contain dirt specks, but these must not interfere with the legibility of normal office typing on the paper.
4. This paper is to contain at least 25 percent recycled post-consumer waste fibres.
5. This paper must not contain more than trace quantities of ground-wood fibre.
6. The Physical and Optical Requirements shall be:

Test	Value	Test Method
Nominal Basis Weight (17 x 22 - 1000)	40 lb	CPPA D.3
Nominal Basis Weight	75 g/m ²	
Thickness, average	0.0045 in. 0.11 mm	CPPA D.4
Reflectance, each side	60 % minimum	CPPA E.1P
Printing Opacity	84 % minimum	*TAPPI-425-os-60
Internal Tearing, strength, 1 sheet, each direction	40 g, minimum	CPPA D.9
Folding Endurance (MIT), 1.0 kg double folds, each direction	20 minimum	CPPA D.17P

..... continued

Test	Value	Test Method
Air Resistance (Gurley Porosity)	10 sec/100 ml air, minimum	CPPA D.14
Pick Resistance (Wax Strength Number) each side	13 minimum	CPPA D.11
Water Resistance (Cobb Test) each side	25 g/m ² , maximum	CPPA F.2

* except that the test procedure shall be modified by obtaining Ro and Roo and calculating as follows:

$$\frac{R_o}{R_{oo}} \times 100$$

Printing Quality Control Division, August, 1976

APPENDIX B

Data sheet Z-26

Sources of recycled and/or reclaimed fibres for paper and paperboard manufacture include, but are not limited to the following:

1. Dry paper and paperboard waste generated after completion of the papermaking process: The papermaking process is defined as those manufacturing operations up to and including the trimming and cutting of the paper machine reel into smaller rolls or rough sheets.
2. Finished paper and paperboard products from obsolete inventories of manufacturers, merchants, wholesalers, dealers, printers, converters.
3. a) Paper and paperboard waste, printed or not, resulting from printing, cutting, forming and other converting operations, including over-issues.
b) Butt rolls, mill wrappers and rejected unused stock.
4. Paper, paperboard and fibrous wastes from factories, retail stores, office buildings, homes, etc., after they have passed through their end-usage as a consumer item including:
 - a) Used corrugated boxes and paperboard boxes
 - b) Old newspapers
 - c) Old magazines
 - d) Business papers
 - e) Tabulating cards
 - f) Mixed waste
5. All paper, paperboard and fibrous wastes reclaimed from municipal solid waste.
6. Fibrous wastes produced during wood harvesting, manufacturing, extractive or cutting processes:
 - a) Sawmill slabs and chips
 - b) Sawdust and shavings
 - c) Unbarked forest residues (e.g. tops, branches, etc.)
7. Other Fibrous Wastes
 - a) Linters, and agricultural residues
 - b) Textile wastes and cuttings, rope and rope waste, etc.

Contributed by:

Environmental Services Division and
Paper Trade Sections, C.P.P.A.

Approved by the C.P.P.A. Executive Board.

Issued by the Technical Section,
Canadian Pulp & Paper Association.
August, 1972.

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